

METHOD AND APPARATUS FOR EFFICIENT HEAT
EXCHANGE IN AN AIRCRAFT OR OTHER VEHICLE

ABSTRACT OF THE DISCLOSURE

A heat exchanger extracts heat from a two-phase fluid coolant so that the coolant changes from a vapor state to a liquid state. Two valves have respective
5 inlets which communicate with the coolant in the heat exchanger, and which are physically spaced from each other. Valve control structure responds to the presence of liquid at the inlet to either valve by opening that valve, so that the liquid coolant flows through the valve
10 to a discharge section. A different feature involves a housing with a heat exchanger therein, the heat exchanger having a plurality of coolant conduits that are axially spaced. A flow of air travels axially within the housing, then flows transversely past the conduits to the
15 other side thereof, and then resumes flowing axially on the other side of the conduits.